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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/698,323	10/27/2000	Jeffrey M. Isner	47624-DIV (1417)	6299

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EXAMINER	
NGUYEN, QUANG	

ART UNIT	PAPER NUMBER
1636	

DATE MAILED: 05/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/698,323	ISNER ET AL.	
	Examiner	Art Unit	
	Quang Nguyen, Ph.D.	1636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *50,52,55-63,65-68,70,72-79,82 and 83* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *50, 52, 55-63, 65-68, 70, 72-79, 82-83* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/17/04 has been entered.

Amended claims 50, 52, 55-63, 65-68, 70, 72-79 and new claims 82-83 are pending in the present application, and they are examined on the merits herein.

Response to Applicants' amendment

The Declaration filed on 2/17/04 under 37 CFR 1.131 is sufficient to overcome the US Patent No. 5,880,090 reference.

The rejection under 35 U.S.C. 102(b) as being anticipated by Takeshita et al. (J. Clin. Invest. 93:662-670, 1994; IDS) was withdrawn in light of Applicants' amendment.

Priority

The present application is a division of U.S. Serial No. 09/265,041, filed March 09, 1999, which claims benefit of the provisional application 60/077,262, filed March 09, 1998.

Upon review of the specifications of the U.S. Serial No. 09/265,041 and 60/077,262 applications and comparison with the specification of the present

application, it is determined that the pending claims with specific embodiments directed to a hematopoietic factor which is angiopoietin-2, SCF or FLT-3 ligand, or an effective fragment thereof are only entitled to the priority benefit of the filing date of 03/09/1999. This is because nowhere in the provisional application, the aforementioned hematopoietic factors, angiopoietin-2, SCF and FLT-3 ligand are mentioned.

Accordingly, the pending claims with specific embodiments directed to a hematopoietic factor which is angiopoietin-2, SCF or FLT-3 ligand, or an effective fragment thereof are only entitled to the priority benefit of the filing date of 03/09/1999; whereas the pending claims drawn to other embodiments are entitled to the priority benefit of the filing date of March 09, 1998.

Claim Objections

Claim 83 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 50. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 70 is rejected under 35 U.S.C. 102(b) as being anticipated by Takeshita et al. (J. Clin. Invest. 93:662-670, 1994; IDS). **This is a new ground of rejection.**

The claim is directed to a method for enhancing endothelial progenitor cell (EPC) mobilization in a mammal having chronic or acute ischemia, wherein the method comprises administering an effective amount of at least one hematopoietic factor sufficient to enhance the EPC mobilization in the mammal having the chronic or acute ischemia.

As defined by the present application, **a hematopoietic factor includes VEGF** (see page 21, lines 13-25). Takeshita et al. teach a method of administering VEGF at doses of 500-1,000 ug as a single intraarterial bolus to the internal iliac artery of rabbits in which the ipsilateral fermral artery was excised to induce severe, unilateral hind limb ischemia (see abstract and the entire article). Since the disclosed method of Takeshita et al. has the same step as the instant claimed method (administering to a mammal having chronic or acute ischemia an effective amount of a VEGF), and that the utilized dosage is within the preferred dosage range of contemplated by Applicants, enhancing endothelial progenitor cell mobilization would be an inherent result of the method taught by Takeshita et al.

Therefore, Takeshita et al. anticipate the instant claim.

Claim 70 is rejected under 35 U.S.C. 102(b) as being anticipated by Franco (U.S. Patent 4,296,100; Cited previously).

As defined by the present application, **a hematopoietic factor includes bFGF** (see page 21, lines 13-25). Franco teaches a method of treating an area in the heart of a patient subjected to ischemic heart disease to maintain viability in that area for a sustained time period to salvage said area, said method comprising applying an effective dose of FGF (with pI of about 9.5 in amounts of 10 micrograms to 1 gram per 100 grams of heart) to the heart, and wherein the blood flow in said area is increased over that which would occur in the area without treatment with FGF (See col. 2, lines 26-27; lines 47-50; examples 1 and 2, and the claims). Since the disclosed method of Franco has the same step as the instant claimed method (administering to a mammal having chronic or acute ischemia an effective amount of a bFGF), and that the utilized dosage is within the preferred dosage range of contemplated by Applicants, enhancing endothelial progenitor cell mobilization would be an inherent result of the method taught by Franco.

Therefore, Franco anticipates the instant claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 50, 55-63, 65-66 and 82-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeshita et al. (J. Clin. Invest. 93:662-670, 1994; IDS). **This is a new ground of rejection necessitated by Applicants' amendment.**

Claims 50, 55-63 and 65-66 are drawn to a method for inducing formation of new blood vessels in a mammal having chronic or acute ischemia, wherein the method comprises administering to the mammal an effective amount of vascular endothelial growth factor (VEGF) sufficient to form the new blood vessels in the mammal, and increasing endothelial progenitor cell (EPC) frequency by at least about 20% as determined by a standard EPC isolation assay, and wherein the mammal is a rodent or a primate. Claims 82-83 are directed to a method for inducing formation of new blood vessels in a mammal having chronic or acute ischemia and increasing endothelial progenitor cell frequency, wherein the method comprises administering to the mammal an effective amount of vascular endothelial growth factor (VEGF) sufficient to form the new blood vessels in the mammal, and wherein the mammal is a rodent or a primate.

Takeshita et al. teach a method of administering VEGF at doses of 500-1,000 ug as a single intraarterial bolus to the internal iliac artery of rabbits in which the ipsilateral

fermoral artery was excised to induce severe, unilateral hind limb ischemia (see abstract and the entire article). Statistically significant augmentation of collateral vessel development by angiography as well as the number of capillaries by histology, and greater amelioration of the hemodynamic deficit in the ischemic limb were observed in animals receiving VEGF than in non-treated controls.

Takeshita et al. do not teach explicitly a method of administering VEGF to a mammal having chronic or acute ischemia, **wherein the mammal is a rodent or a primate**.

However, Takeshita et al. teach that the findings in the disclosed rabbit ischemic hind limb model establish proof of principle for the concept that the angiogenic activity of VEGF is sufficiently potent to achieve therapeutic benefit, and that such a strategy might ultimately be applicable **to patients with severe limb ischemia secondary to arterial occlusion disease** (see abstract).

Accordingly, at the effective filing date of the present application it would have been obvious for an ordinary skill artisan to modify the method of Takeshita et al. by administering VEGF at doses of 500-1,000 ug to a human patient with severe limb ischemia to attain therapeutic angiogenesis. The modified method of Takeshita et al. is indistinguishable from the presently claimed invention because it has the same step administering to a rodent or a primate having chronic or acute ischemia an effective amount of a VEGF, and that the utilized VEGF dosage is within the preferred dosage range of contemplated by Applicants.

An ordinary skilled artisan would have been motivated to carry out the above modification because Takeshita et al. teach clearly that the findings in the disclosed rabbit ischemic hind limb model establish proof of principle for the concept that the angiogenic activity of VEGF is sufficiently potent to achieve therapeutic benefit, and that such a strategy might ultimately be applicable to patients with severe limb ischemia secondary to arterial occlusion disease.

An ordinary skilled artisan would have a reasonable expectation of success based on the findings of Takeshita et al., and the high level of skill of an ordinary skilled artisan in the art of angiogenesis at the effective filing date of the present application.

Therefore, the claimed invention as a whole was *prima facie* obvious in the absence of evidence to the contrary.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 50, 52, 55-63, 65-68, 70, 79 and 82-83 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 3-5 of U.S. Patent No. 5,980,887. Although the conflicting claims are not identical, they are not patentably distinct from each other because a method for inducing formation of new blood vessels in a rodent or a primate having chronic or acute ischemia, wherein the method **comprises** administering to the mammal an effective amount of a vascular endothelial growth factor (VEGF) or a hematopoietic factor sufficient to form the new blood vessels in the mammal, and increasing endothelial progenitor cell (EPC) frequency (including by at least 20% as determined by a standard EPC isolation assay); and a method for enhancing EPC in a mammal having chronic or acute ischemia **comprising** administering an effective amount of at least one hematopoietic factor sufficient to enhance the EPC mobilization in the mammal of the presently claimed invention **are indistinguishable from** a method for inducing the formation of new blood vessels in an ischemic tissue in a patient in need of treatment for cerebrovascular ischemia, renal ischemia, pulmonary ischemia, limb ischemia, ischemic cardiomyopathy as well as myocardial ischemia (e.g., humans as well as mice), said method **comprises** the same step of administering to the patient an endothelial mitogen including vascular endothelial growth factor, granulocyte/macrophage CSF, macrophage CS, colony stimulating factor of the issued U.S. Patent 5,980,887. The issued U.S. Patent 5,980,887 teaches specifically that an "endothelial cell mitogen" means any protein, polypeptide, mutein or portion that is capable of, directly or indirectly, inducing endothelial cell growth (col. 8, lines 28-30),

and that endothelial cell mitogen may also be administered to the patient in conjunction with or subsequent to, the administration of the EC progenitor cells (col. 8, lines 9-12).

Claims 50, 52, 55-63, 65-68, 70 and 82-83 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of copending Application No. 10/696391. Although the conflicting claims are not identical, they are not patentably distinct from each other because a method for inducing formation of new blood vessels in a rodent or a primate having chronic or acute ischemia, wherein the method **comprises** administering to the mammal an effective amount of GM-CSF sufficient to form the new blood vessels in the mammal, and increasing endothelial progenitor cell (EPC) frequency (including by at least 20% as determined by a standard EPC isolation assay); and a method for enhancing EPC in a mammal having chronic or acute ischemia **comprising** administering an effective amount of at least one hematopoietic factor sufficient to enhance the EPC mobilization in the mammal of the presently claimed invention **are indistinguishable from** a method for inducing the formation of new blood vessels in a mammal, including humans as well as mice, said method **comprises** the same step of administering to the mammal an effective amount of GM-CSF sufficient to form the new blood vessels in the mammal of the co-pending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 50, 52, 55-63, 65-68, 70 and 82-83 are directed to an invention not patentably distinct from claims 1-22 of commonly assigned copending Application No. 10/696391. Specifically, a method for inducing formation of new blood vessels in a rodent or a primate having chronic or acute ischemia, wherein the method **comprises** administering to the mammal an effective amount of GM-CSF sufficient to form the new blood vessels in the mammal, and increasing endothelial progenitor cell (EPC) frequency (including by at least 20% as determined by a standard EPC isolation assay); and a method for enhancing EPC in a mammal having chronic or acute ischemia **comprising** administering an effective amount of at least one hematopoietic factor sufficient to enhance the EPC mobilization in the mammal of the presently claimed invention **are indistinguishable from** a method for inducing the formation of new blood vessels in a mammal, including humans as well as mice, said method **comprises** the same step of administering to the mammal an effective amount of GM-CSF sufficient to form the new blood vessels in the mammal of the co-pending application.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302). Commonly assigned Application No. 10/696391 discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee is required under 35 U.S.C. 103(c) and 37 CFR 1.78(c) to either show that the conflicting inventions were

commonly owned at the time the invention in this application was made or to name the prior inventor of the conflicting subject matter. Failure to comply with this requirement will result in a holding of abandonment of the application.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

Claims 72-79 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 24-30 and 47-48 of copending Application No. 10/696391. Although the conflicting claims are not identical, they are not patentably distinct from each other because a method for preventing or reducing the severity of blood vessel damage in a mammal having chronic or acute ischemia, wherein the method comprises administering to the mammal an effective amount of GM-CSF, and exposing the mammal having the chronic or acute ischemia to conditions conducive to damaging the blood vessels, the amount of GM-CSF being sufficient to prevent or reduce the severity of the blood vessel damage in the mammal; and the method for enhancing endothelial progenitor cell (EPC) mobilization in a mammal having chronic or acute ischemia comprising administering an effective amount of at least one hematopoietic factor sufficient to enhance EPC mobilization in the mammal having chronic or acute ischemia **are encompassed** in a method for preventing or reducing the severity of blood vessel damage in any mammal (including

one that has chronic or acute ischemia), wherein the method comprises administering to the mammal an effective amount of GM-CSF, and exposing the mammal to conditions conducive to damaging the blood vesels, the amount of GM-CSF being sufficient to prevent or reduce the severity of the blood vessel damage in the mammal; and the method for enhancing endothelial progenitor cell (EPC) mobilization in any mammal (including one that has chronic or acute ischemia) comprising administering an effective amount of at least one hematopoietic factor sufficient to enhance EPC mobilization in the mammal of the co-pending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 72-79 are directed to an invention not patentably distinct from claims 24-30 and 47-48 of commonly assigned copending Application No. 10/696391. Specifically, a method for preventing or reducing the severity of blood vessel damage in a mammal having chronic or acute ischemia, wherein the method comprises administering to the mammal an effective amount of GM-CSF, and exposing the mammal having the chronic or acute ischemia to conditions conducive to damaging the blood vessels, the amount of GM-CSF being sufficient to prevent or reduce the severity of the blood vessel damage in the mammal; and the method for enhancing endothelial progenitor cell (EPC) mobilization in a mammal having chronic or acute ischemia comprising administering an effective amount of at least one hematopoietic factor sufficient to enhance EPC mobilization in the mammal having chronic or acute ischemia

are encompassed in a method for preventing or reducing the severity of blood vessel damage in any mammal (including one that has chronic or acute ischemia), wherein the method comprises administering to the mammal an effective amount of GM-CSF, and exposing the mammal to conditions conducive to damaging the blood vesels, the amount of GM-CSF being sufficient to prevent or reduce the severity of the blood vessel damage in the mammal; and the method for enhancing endothelial progenitor cell (EPC) mobilization in any mammal (including one that has chronic or acute ischemia) comprising administering an effective amount of at least one hematopoietic factor sufficient to enhance EPC mobilization in the mammal of the co-pending application.

Claims 50, 52, 55-63, 65-68, 70 and 82-83 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of copending Application No. 10/714574. Although the conflicting claims are not identical, they are not patentably distinct from each other because a method for inducing formation of new blood vessels in a rodent or a primate having chronic or acute ischemia, wherein the method **comprises** administering to the mammal an effective amount of a vascular endothelial growth factor (VEGF) or a hematopoietic factor selected from the recited group sufficient to form the new blood vessels in the mammal, and increasing endothelial progenitor cell (EPC) frequency (including by at least 20% as determined by a standard EPC isolation assay); and a method for enhancing EPC in a mammal having chronic or acute ischemia **comprising** administering an effective amount of at least one hematopoietic factor sufficient to

enhance the EPC mobilization in the mammal of the presently claimed invention **are encompassed by** a method for inducing the formation of new blood vessels in a mammal, including humans as well as mice, said method **comprises** the same step of administering to the mammal an effective amount of a vascularization modulating agent such as GM-CSF, M-CSF, SCF, SDF-1, G-CSF, angiopoietin-1, angiopoietin-2, FLT-3 ligand to form the new blood vessels in the mammal of the co-pending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 72-79 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 24-30 and 47-48 of copending Application No. 10/714574. Although the conflicting claims are not identical, they are not patentably distinct from each other because a method for preventing or reducing the severity of blood vessel damage in a mammal having chronic or acute ischemia, wherein the method comprises administering to the mammal an effective amount of GM-CSF, and exposing the mammal having the chronic or acute ischemia to conditions conducive to damaging the blood vessels, the amount of GM-CSF being sufficient to prevent or reduce the severity of the blood vessel damage in the mammal; and the method for enhancing endothelial progenitor cell (EPC) mobilization in a mammal having chronic or acute ischemia comprising administering an effective amount of at least one hematopoietic factor sufficient to enhance EPC mobilization in the mammal having chronic or acute ischemia **are encompassed** in a method for

preventing or reducing the severity of blood vessel damage in any mammal (including one that has chronic or acute ischemia), wherein the method comprises administering to the mammal an effective amount of GM-CSF, and exposing the mammal to conditions conducive to damaging the blood vesels, the amount of GM-CSF being sufficient to prevent or reduce the severity of the blood vessel damage in the mammal; and the method for enhancing endothelial progenitor cell (EPC) mobilization in any mammal (including one that has chronic or acute ischemia) comprising administering an effective amount of at least one hematopoietic factor sufficient to enhance EPC mobilization in the mammal of the co-pending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang Nguyen, Ph.D., whose telephone number is (571) 272-0776.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's mentor, David Guzo, Ph.D., may be reached at (571) 272-0767, or SPE, Irem Yucel, Ph.D., at (571) 272-0781.

To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1636; Central Fax No. (703) 872-9306.

Quang Nguyen, Ph.D.

DAVID GUZO
PRIMARY EXAMINER